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ABSTRACT

A study investigated the effect of video and narrative presentations on children's comprehension and vocabulary acquisition. Participants were students in four heterogeneously grouped eighth-grade English classes (n=16, 22, 21, and 11) in a rural school district in southwestern New York. The short story selected was Sir Arthur Conan Doyle's "The Red-Headed League." It was chosen for its difficulty level--the text is at the instructional level of most of the students involved. Each class received a different mode of instruction: one class read the story to themselves; another class viewed a video rendition of the story; another class saw the same video but had captions included on the screen; the final class both read the text version to themselves during class and then viewed the video the following class period. A pretest (a matching test) and a posttest (the same matching test with answers in a different order, a series of multiple choice questions to measure comprehension and recall, and a short-answer evaluation question to measure critical thinking) were given. Significant findings are that students who read the text had greater vocabulary acquisition, while students who viewed the video showed a greater comprehension of the story. It appears that video watching has a positive effect on comprehension, and vocabulary acquisition seems to be positively affected when coupled with text. Closed captioning is a recent positive addition to teaching reading through television and video. (Contains two figures; 14 references; and sample pretest and posttests.) (NKA)

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# Comparison of Video and Text Narrative Presentations on Comprehension and Vocabulary Acquisition

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Paper presented at the

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## Television's Effect on Vocabulary and Comprehension

The question of what effect television viewing has on children and their reading abilities is one that has been raised by many. This study investigates the effect of video and narrative presentations on children's comprehension and vocabulary acquisition.

## Related Research

In a study of over 4,000 children, Neuman (1980) did not find a difference between television viewers and non-viewers in terms of children's fatigue in the morning, in the quality of homework, nor in concentration on task.

Neuman also investigated the effects of a technique called "scripting" (1980). In scripting, students view television programs in the classroom while at the same time reading along with a printed script. Teachers pre-teach word analysis and comprehension skills. After viewing the program, students have the opportunity to act out episodes or use the scripts to produce their own version of a scene. This method involves the students in interesting material and gives them an opportunity for self-expression and creativity.

Greenstein (1954) compared the amount of television watched with grade point averages of 67 students. This study found that the number of hours of television watched had only a minor influence on reading achievement and school success.

In a study by Smith, adult learners were presented with several television shows that were captioned (1990). These shows included *Sesame Street*, a soap opera, a courtroom drama, and an episode of *Reading Rainbow*. The

*Reading Rainbow* program was the most successful with regard to language acquisition and language proficiency. Some positive results of the viewing of closed-captioned shows included the use of new and unusual vocabulary during discussion and written exercises that followed the viewing.

A study by Gough (1979) found that commercial television versions of popular book series, including Laura Ingalls Wilder's *Little House on the Prairie* and Mary Norton's *The Borrowers*, have led children to look for these books specifically. In 1978, a study by Busch found that 89% of students in grades 2-12 had watched at least one program on television that caused them to read a book (Gough, 1979). This study shows how students can become motivated to read a book after they view characters on television. Having seen programs on television, students become motivated to read to find out more about the characters on the television series.

*Sesame Street* is designed to prepare disadvantaged children for school. After watching ten sequential, hour-long episodes of *Sesame Street*, Mates and Strommen (1996) gained an understanding of the curriculum taught on the show and subsequently discovered many problems with the show. They described some of the segments as flowing too fast (Number countdown 12-1) for students to understand the concept that is being taught. Also, some of the segments had no educational value (Cookie Monster eating cookies).

The researchers present suggestions to improve the educational value of the show. These suggestions include showing the characters reading signs and messages, for the purpose of figuring out where to go or what to do. The

researchers believe the audience should see the characters writing messages, and reading signs, directions, poems, and books, in order to identify things, communicate ideas, or share experiences or feelings.

In another article about *Sesame Street*, published by the Children's Television Workshop (1990), researchers found that the children who watched the most were the ones who learned the most. *Sesame Street's* first two seasons showed that children in the "frequent viewers" control group scored 40 points higher on a post-test of 203 items than a comparable group of children who had never watched the show. This evaluation also showed that the skills given the most time and attention on the program were the ones the children learned the best. A follow up investigation with children from the first study indicated that *Sesame Street* viewers were better prepared for school than non-viewing classmates, and they adapted well to the school experience.

*The Electric Company* series was made for children ages 7-12 years old (Tirone-Smith, 1985). By using this series in the classroom, the show served as an entertaining, self-tutorial lesson which would free the teacher to give attention to individuals who may need added instruction.

After the first season of *The Electric Company*, the Educational Testing Service found that children who watched the program scored significantly higher than non-viewers in all nineteen subject areas in the curriculum of the series (Tirone-Smith, 1985). Teachers used the segments of the series to increase the student's motivation and enthusiasm in learning to read.

This article presents positive information about the use of television to

increase students' motivation to learn to read. The article presents activities that can be incorporated into whole class activities after having viewed a segment of *The Electric Company*.

One negative factor is that the show did not reinforce its goals sequentially. One day the show would present four goals, then move on to the next four without reinforcing the skills learned the previous day.

Another important children's television show is *Reading Rainbow*. Reissner (1996) explains that *Reading Rainbow* is a show that combines pictures from children's storybooks with a professional reader. According to the study, the show appears to have led to increased circulation of these stories in public libraries and bookstores. Therefore, television has the opportunity to interest children to participate in a variety of activities, including reading.

Rice, et al., (1990), at the Center for Research on the Influences of Television on Children at the University of Kansas, found that, in a sample of 326 children, only the children in *Sesame Street's* targeted age range benefited from watching *Sesame Street* in terms of expanded vocabulary. This study helps to support the Children's Television Workshop study (1990) where it was stated that children are in a stage of rapid vocabulary acquisition between the ages of one-and-one-half to six years of age. They learn approximately nine new words every day.

In another study by Rice and Woodsmall (1988), it was thought that vocabulary is acquired by preschoolers by "fast mapping". This means that children get a partial understanding of a word through a single exposure to it.

There were 61 preschoolers in the study. The experimental group watched a video with controlled vocabulary and the control group watched the same video without the controlled vocabulary. Pretests and posttests were given. The experimental group showed a significant gain on a posttest of the controlled vocabulary, learning new words like "viola", "gramophone", and "artisan".

In a study comparing two television stations, PBS and Nickelodeon, Klein (1997) found that there was no significant difference in the amount of vocabulary that was presented. She cited other studies that show that vocabulary development through television is valuable.

A study conducted in The Netherlands by van der Molen and van der Voort (1997) sought to determine the effects on recall when students were presented a news story either audiovisually or in print. The participants included 152 students from grades 4 and 6 in an urban school district. Half of the students read five news related stories while that other half saw the news on television. The students were then evaluated on a posttest containing 56 open-ended questions. The authors of the study found evidence to support their hypothesis that children remembered televised news stories better than printed versions.

A similar study by Beentjes and van der Voort (1991), also conducted in The Netherlands, sought to compare the written retellings of students who had read a printed version of a story with those who had watched a video version of the same story. The subjects included 127 students in grades 4 through 6 from an urban school district. The children were asked to create a written essay in

which they retold the story as accurately as possible. Evaluation of the essays found that the essays of children who watched the film contained more scenes and fewer errors. However, the children who had read the story were superior in specific referencing of story characters and in using descriptive details in their written retellings.

Another study conducted in The Netherlands by Koolstra, van der Voort, and van der Kamp (1997) sought to determine the longitudinal effects of television viewing on children's reading comprehension and decoding skills. The study contained 1,050 students in grades 2 and 4 and was conducted over a three-year period with assessment at one-year intervals. The students were surveyed on their television viewing habits including amount of time spent watching television and the amount watched, as well as their book reading habits including reading frequency and attitude. Also, a Dutch standardized test was conducted to measure levels of reading comprehension and word decoding. While the authors noted limitations, they do believe that the panel study provides support for theories that television viewing has an inhibiting effect on the development of children's reading comprehension and hypothesis that watching foreign subtitled television programs promotes development of children's decoding skills.

## Methods

The participants in this study consisted of four English classes of eighth grade students from a school district in rural southwestern New York State. The classes contain 16, 22, 21, and 11 students. The classes are heterogeneously

grouped with a variety of academic abilities, socioeconomic backgrounds, and interests.

The study was designed to investigate what, if any, affect the mode of instruction had on vocabulary acquisition and comprehension. The story selected was "The Red-headed League" by Sir Arthur Conan Doyle. This text was selected for its level of difficulty. The text is at the instructional level for most of the students involved; therefore, the results would not be skewed by a text that is either too easy or too difficult.

Each class received a different mode of instruction for the story. One class read the short story to themselves. Another class viewed a video rendition of the short story during class time. Another class saw the same video rendition, but also had the captions included on the screen. The final class both read the text version of the story to themselves during class time and then viewed the video rendition the following class period.

The assessment measures contained two parts: a pretest and a posttest (see Appendix). The pretest given to all classes consisted of only one part, a matching test that asked students to identify the correct definition for a set of preselected vocabulary words of varying difficulty that appeared in both the text and the video. The posttest was given to all classes and consisted of three parts. The first part was the same vocabulary assessment that was given as a pretest with the answers presented in a different order. The second part was a series of multiple choice questions designed to test comprehension and recall of the story or video on various levels of understanding. The final part of the posttest was a

short answer evaluation question, designed to measure student's ability to apply higher order thinking skills to the text or video.

## Data Collection and Analysis

Each question on both the pretest and the posttests was worth one point. There were ten questions on each test, for a total of ten points. The scores for the vocabulary pretest and posttest are presented in a comparison in Figure 1. The comprehension posttest scores are presented in Figure 2.

Figure 1.

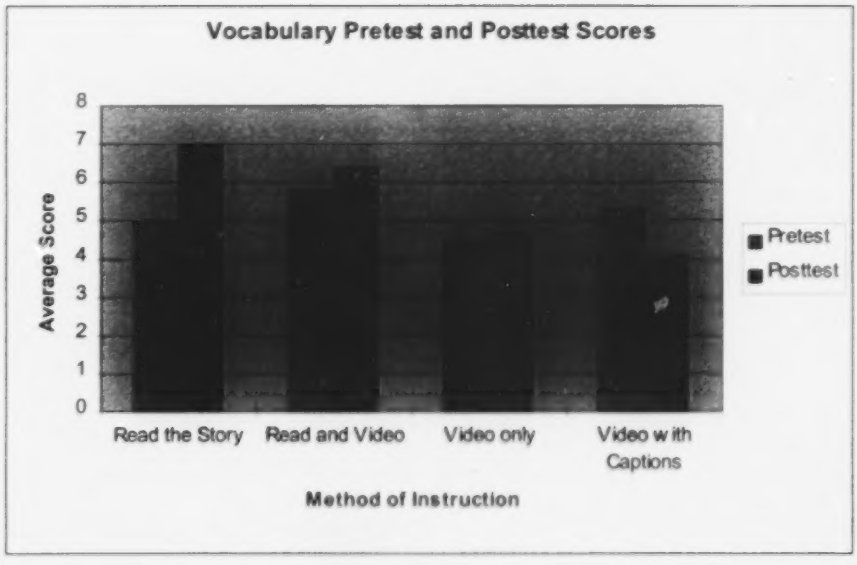
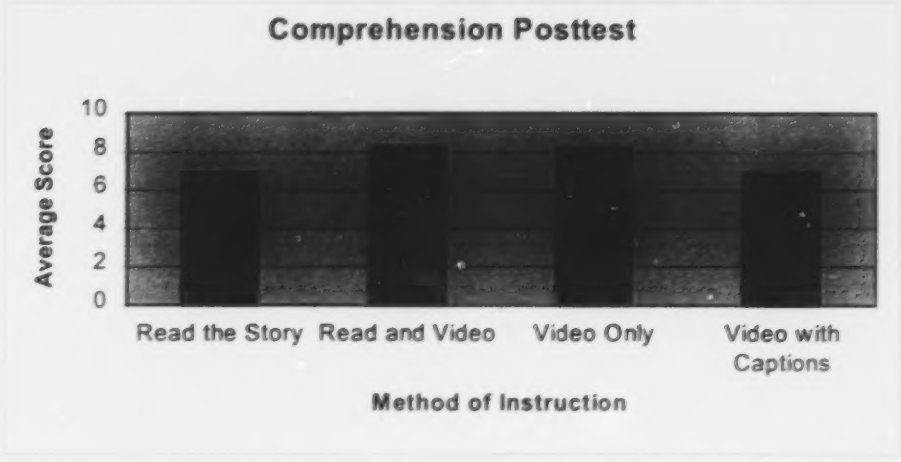


Figure 2.




In analyzing our data, we examined the role prior knowledge played in the students' accuracy of responses on the pretest. These scores were compared to the scores for the vocabulary section on the posttest to see if there was any significant improvement or learning. In examining the posttests of all four classes, we looked for patterns or relationships between the scores students earned and the method of instruction they received. We compared these findings with the findings of similar research conducted in this area.

Based on the results, it is clear that the greatest gains in vocabulary from the pretest to the posttest were made by the two classes that read the text as part of their method of instruction. The class that only read the text had a two point gain from the pretest to the posttest, while the class that read the story and watched the video had a .6 gain.

In terms of the average scores on the comprehension portion of the

posttest, there was a 1.4 point differential in the scores. The class that only read the text was one of the two groups scoring the lowest on the comprehension portion. The highest score on the posttest was obtained by both the video group and the text and video group.

The significant findings of the study are that students who read the text had a greater acquisition of vocabulary, while students who viewed the video showed a greater comprehension of the story. Our goal was to determine which method helped students best. These findings show that video helps with comprehension and reading helps students with vocabulary acquisition.

## Discussion

There are various factors that may have affected the results of this study that should be mentioned. First of all, this experiment was conducted the week before a two-week vacation for all students and staff. The students were aware that they were participating in the study and the general purpose of the study. They were not aware of the expected results however. The grades students earned on each of the assessments had no bearing on their course grade for the quarter. Students who only took a portion of the assessments due to absence were not included in the results.

Although the classes are all heterogeneously grouped and of approximately equal academic achievement, the teacher performing the experiment did select the treatment received by each group based on certain perceptions. For example, the text only group was selected because they seemed to be the most academically talented (based on average course grades

for the first three quarters of the year). Interestingly, their comprehension average was the lowest of the four groups, lending support to our belief that video does lead to increased comprehension.

Another significant finding of our study was that of vocabulary acquisition. The groups that showed the only significant improvement were those who read the text. We believe that this increase is due to exposure. The students who read the text were able to reread anything they did not understand while the students who watched the video had a one-time only exposure to the selected words.

**Summary**

Based on the many research articles studied and the research conducted in this study, television and video watching appear to have a positive effect on comprehension. Vocabulary acquisition also seems to be positively affected when coupled with text. Closed-captioning is a recent positive addition to teaching reading through television and video. Closed-captioning is useful for regular education, special education, other language learners, and adult learners. However, due to the somewhat limited number of research studies investigating specifically the effect of mode of instruction on vocabulary acquisition and comprehension, more research in this area would be beneficial.

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# Appendix

**Name** _____

**Mod** _____

**Method** _____

## Vocabulary Pretest

**Directions: Write the letter of the definition you think best matches each word on the line provided.**

| | | |
|---|---|---|
| _____ 1. billet | A. extraordinary or rare |
| _____ 2. conundrum | B. a deceitful trick |
| _____ 3. derbies | C. causing one to look into one's own thoughts / feelings |
| _____ 4. formidable | D. annoy |
| _____ 5. hoax | E. puzzling questions or problems |
| _____ 6. holiday | F. awe-inspiring |
| _____ 7. introspective | G. a small sofa |
| _____ 8. settee | H. a day off from work |
| _____ 9. singular | I. a position or job |
| _____ 10. vex | J. handcuffs |

**Name** _____

**Mod** _____

**Method** _____

## Vocabulary Posttest

**Directions: Write the letter of the definition you think best matches each word on the line provided.**

| | | |
|---|---|---|
| _____ 1. billet | A. puzzling questions or problems |
| _____ 2. conundrum | B. causing one to look into one's own thoughts / feelings |
| _____ 3. derbies | C. a day off from work |
| _____ 4. formidable | D. extraordinary or rare |
| _____ 5. hoax | E. handcuffs |
| _____ 6. holiday | F. annoy |
| _____ 7. introspective | G. a position or job |
| _____ 8. settee | H. a deceitful trick |
| _____ 9. singular | I. a small sofa |
| _____ 10. vex | J. awe-inspiring |

**Name** _____
**Mod** _____
**Method** _____

## Comprehension Posttest

**Multiple Choice Directions: Choose the answer that best completes each statement or question and write the letter on the line provided.**

_____ 1. "The Red-headed League" is a story about how a detective uses his reasoning skills to:
a. improve his knowledge of criminal behavior
b. impress friends and colleagues
c. restore a pawnbroker's confidence
d. uncover a plan to commit a major crime

_____ 2. The name of the man Holmes and Watson are helping in the story is:
a. John Clay
b. Jabez Wilson
c. Sir Arthur Conan Doyle
d. Vincent Spaulding

_____ 3. The Red-headed League was actually a cover up for a plot to:
a. murder the president of a bank
b. smuggle illegal goods into the city
c. steal goods from the client's shop
d. rob a bank

_____ 4. The man's job with the Red-headed League was to:
a. copy from the encyclopedia
b. write letters to other members of the league
c. guard the door from 10 to 2
d. cook lunch for the other tenants of the building

_____ 5. The reason the man stopped going to the job was:
a. they could no longer afford to pay him
b. his own business was too busy to keep two jobs
c. the league dissolved
d. he was arrested for stealing

_____ 6. The main reason the man was given the job was:
a. he had red hair
b. he could write well
c. to get him out of his shop while his assistant worked on the crime plan
d. he was the most qualified

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_____ 7. The most significant difference between the characters of Holmes and Watson lies in their:

a. powers of observation
b. professional responsibilities
c. appreciation of music
d. interest in the bizarre

_____ 8. Holmes first suspected the man's assistant because:

a. he caught him in the act
b. he was willing to work for half wages
c. he had urged the man to take the job
d. he hadn't worked for him long

_____ 9. The main reason that Holmes taps his walking stick on the ground in front of the man's shop is to:

a. get the attention of the assistant
b. make it seem like he needed help
c. determine where the tunnel was located
d. none of the above

_____ 10. Which event in the story is a crucial step in Holmes's solution of the case?

a. the observation that the man had been to China
b. the walk around Saxe-Coburg Square, where the man's shop was located
c. the invitation to the police agent from Scotland Yard
d. the description of the man's arrival at the League's offices

**Short Answer Essay Directions: Completely answer the following question on the paper provided.**

Would you have been as easily taken in by the Red-headed League as the man was? Think about his experiences with the league from the time he reads the ad until the end of the story. Then pretend you are a red-headed man who has been offered a position in the League. Create a response that tells whether you would or would not have fallen for the plot and be sure to include specific examples from the story to support your answer.